Dean K. Matsuura
Manager
Regulatory Affairs

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PUBLIC UTILITIES
COMMISSION

The Honorable Chairman and Members of the
Hawaii Public Utilities Commission
Kekuanaoa Building, 1st Floor
465 South King Street
Honolulu, Hawaii 96813

Dear Commissioners:

Subject: Docket No. 2008-0303
Advanced Metering Infrastructure Project
Hawaiian Electric Companies' Responses to the
Commission's Information Requests

The Commission submitted Information Requests ("IRs") prepared by the Commission's consultant, the National Regulatory Research Institute, by letter dated May 21, 2009 in the subject proceeding.

The Hawaiian Electric Companies filed responses to PUC-IRs 1 to 4, and 6 to 16 on June 22, 2009.[1]

Please find enclosed the Hawaiian Electric Companies' response to the remaining IR, PUC-IR 5.

Very truly yours,

Enclosures

cc: Division of Consumer Advocacy
Henry Q Curtis (Life of the Land)
Warren S. Bollmeier II (HREA)
Mark Duda (HSEA)

[1] The "Hawaiian Electric Companies" are Hawaiian Electric Company, Inc., Hawaii Electric Light Company, Inc., and Maui Electric Company, Limited.

PUC-IR-5

Ref: General Prudence; PUC-IR-II.1.

According to Exhibit 18, the HECO Companies propose beginning development of the MDMS System and the basic CIS and RNI integration in Q1, 2010. The TGB Network deployment is projected to begin in Q4, 2010 and additional CIS and RNI integration would begin in Q1, 2011. Advanced meter deployment would start in Q2, 2011. Additionally, according to page 1 of Exhibit 19, advanced meter deployment is scheduled to take place for HECO from 2011 to 2013, for MECO during 2014, and for HELCO during 2015. Based on this development and deployment schedule:

a. Please explain how the proposed implementation schedule is optimal when considering all issues, including in part, the book value remaining on replaced meters, labor cost, and operational savings?
b. What is the rationale for first installing meters in the HECO service territory, followed by the MECO service territory and the HELCO service territory? How does this affect the proposed recovery of book value of replaced meters described on page 5 of Exhibit 24 of the Application?
c. Please provide an analysis of whether the benefits and costs of AMI differ by customer class or location. Does the current installation schedule consider prioritizing customers for whom the relative cost and benefits of advanced meters are most favorable?
d. Would it be possible to begin deployment of advanced meters prior to 2011 in order to receive operational benefits sooner? If not, what operational or procurement issues impede a faster deployment?
e. If possible, how might faster deployment of advanced meters affect the need for accelerated depreciation of both replaced meters and advanced meters?
f. If deployment of advanced meters began in 2010, what is the scope of benefits likely received during 2010 and 2011?

HECO Companies' Response:

a. Attachment 1 to the Companies' response to CA-IR-8 provides the proposed implementation schedule. The Companies' response to CA-IR-10, part b., explains the manner in which the project schedule was established. The project schedule provides a reasonable balance amongst Company resources, deployment speed and ratepayer impacts, while meeting the goal of providing AMI technology to the majority of the Companies' customers on the islands of Oahu, Maui, and the Big Island. Ratepayer

impacts were considered in determining the time periods over which the Companies' would recover the book value of the Companies' existing meters.

b. The Companies' response to CA-IR-10, part b., provides the rationale for first installing meters in the HECO service territory, followed by the MECO service territory and then the HELCO service territory. As described on page 72 of the Companies' application, HECO proposes to recover the remaining $13,960,000 estimated book value (as of December 31, 2009) of its existing non-AMI meters over a three-year period beginning upon receipt of the Commission's decision and order in this docket. This recovery period is equivalent to the proposed meter deployment timeframe. MECO proposes to recover the remaining $4,899,000 estimated book value (as of December 31, 2009) of its existing non-AMI meters over a period beginning upon receipt of the Commission's decision and order in this docket and ending when MECO's meter installation begins in 2014. Assuming that the Commission approves the Companies' application, the proposed project schedule would result in the recovery of the book value of existing MECO meters in four years. HELCO similarly proposes to recover the remaining $9,238,000 estimated book value (as of December 31, 2009) of its existing non-AMI meters over a period beginning upon receipt of the Commission's decision and order and ending when HELCO's meter installation begins in 2015. Assuming the Commission approves the Companies' application by early 2010, the proposed project schedule would result in the recovery of existing HELCO meters in five years.

c. As discussed in the response to CA-IR-1, the Companies have not developed a detailed rollout plan for the AMI project; however, it is likely that AMI meter deployment will focus on meter reading routes and geographic areas in order to minimize installation costs

and provide immediate labor cost reductions in meter reading and field services. The actual costs of AMI will be different for Residential and Commercial & Industrial customers due to the type of metering that will be provided for these two customer classifications. Within each of these two classes, there will also be some difference in installation costs due to the physical nature and accessibility of each customer premise. The Companies are proposing to recover incremental revenue requirements on the basis of each customer's electricity consumption rather than the actual cost of the AMI meter installation. As discussed in the response to CA-IR-1, the Companies did not differentiate the benefits for each customer class; however, the Companies expect that AMI, coupled with future programs such as demand response and time-of-use ("TOU") rates, will provide larger benefits for customers who consume more electricity. Estimated surcharge recovery levels on kWh basis are shown at page 68 and revenue requirements are included in Exhibit 22 of the instant application.

d. As described in the responses to CA-IR-2 and CA-IR-8, the Companies proposed to begin meter deployment in 2011 in order to provide for a reasonable time to implement the Meter Data Management System (MDMS) and to interface the MDMS to the front-end AMI system and the back-end CIS. In fact, the Companies have scheduled the implementation of the MDMS in three phases in order to provide adequate time for AMI system testing and personnel training and process familiarization. To implement AMI, the Companies' AMI vendor must also install the new Regional Network Interface ("RNI") at the Companies' designated location and complete a comprehensive Site Acceptance Test ("SAT") (as defined within Exhibit H of the Sensus agreement). Portions of the SAT cannot be completed prior to implementation of the MDMS Phase I.

Mass deployment of the AMI meters, prior to satisfactory completion of the SAT, would place unacceptable risks on the project.

As described in the Companies' response to CA-IR-9, if the new CIS is not available, the interaction and operation of the advanced AMI functionality would have to be performed within the MDMS. In this scenario, the MDMS would be interfaced to the legacy CIS (CB-ACCESS) to support basic billing. The interface could not support complex billing requirements such as TOU. In this scenario, the Companies would likely request Commission approval for TOU limitations as noted in the instant application, Exhibit 25, page 2 (Limitations on Participation in Time-of-Use Rate Options).

Even if the Companies were directed to proceed with the mass deployment prior to completing the required prerequisites (as described above), the Companies do not have sufficient resources to manage all the necessary project tasks and mass meter deployments in parallel. Nationwide, manpower resources are limited and there is a lack of qualified personnel skilled in the diverse aspects of AMI systems. Many utilities are implementing and/or piloting these new technologies at the same time, which results in a high level of competition for these skilled resources.

e. As noted above, faster deployment of AMI meters and the associated software systems is not warranted. However, an accelerated pace of AMI project implementation would likely result in the Companies' need to request a shorter recovery period for both existing non-AMI meters and new AMI meters. This would increase the near-term ratepayer impacts.

f. Attachment 1 to this response shows the estimated AMI benefits if the deployment of the advanced meters could be accelerated to begin in 2010. In 2010, benefits would be

limited to meter accuracy and meter capital savings. The meter reading and field services savings would not materialize until Phase I of the MDMS was implemented. As discussed in part d. of this response, the Companies believe that acceleration of the proposed project schedule is not warranted, given the critical dependence of the project on the MDMS and integration to other software systems.

Quantifiable Benefits With Accelerated Meter Installation Schedule (in $000s)

QUANTIFIABLE BENEFITS ($000s)			2010	2011	2012	2013	2014	2015	TOTAL
(1) O&M Reduction	Meter Reading Savings	HECO	-	109	2,377	3,315	3,430	3,533	**12,764**
		MECO	-	-	-	-	971	1,000	**1,971**
		HELCO	-	-	-	-	-	762	**762**
		Total	**-**	**109**	**2,377**	**3,315**	**4,401**	**5,295**	**15,497**
	Field Service Savings	HECO	-	329	511	1,052	1,084	1,116	**4,092**
		MECO	-	-	-	173	356	367	**896**
		HELCO	-	-	-	-	214	440	**654**
		Total	**-**	**329**	**511**	**1,225**	**1,654**	**1,923**	**5,642**
Customer Benefit	Theft of Electricity Savings	HECO	-	866	1,479	1,795	1,813	1,831	**7,784**
		MECO	-	-	-	220	447	454	**1,121**
		HELCO	-	-	-	255	519	529	**1,303**
		Total	**-**	**866**	**1,479**	**2,270**	**2,779**	**2,814**	**10,208**
	Accuracy of Meter Savings	HECO	827	1,411	1,712	1,730	1,747	1,764	**9,191**
		MECO	-	-	-	239	486	494	**1,219**
		HELCO	-	-	-	-	311	634	**945**
		Total	**827**	**1,411**	**1,712**	**1,969**	**2,544**	**2,892**	**11,355**
Future Capital Reduction	Meter Capital Savings	HECO	398	497	603	678	714	751	**3,641**
		MECO	-	-	-	178	206	218	**602**
		HELCO	-	-	-	-	224	270	**494**
		Total	**398**	**497**	**603**	**856**	**1,144**	**1,239**	**4,737**
TOTAL QUANTIFIABLE BENEFITS		HECO	1,225	3,212	6,682	8,570	8,788	8,995	**37,472**
		MECO	-	-	-	810	2,466	2,533	**5,809**
		HELCO	-	-	-	255	1,268	2,635	**4,158**
		Total	**1,225**	**3,212**	**6,682**	**9,635**	**12,522**	**14,163**	**47,439**

(1) Only O&M Reduction Benefits flow through the Surcharge